

Robusta Special equipped lamps

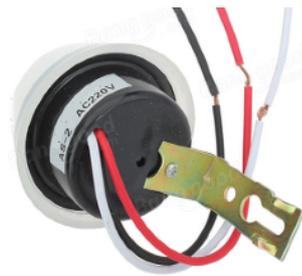
Robusta series of street lamps and special functionality models

Robusta series of lamps can be much more than just a street lamp by special options we are happy to offer. This paper describes these special options that we can use in any Robusta lamp. Practically we look at larger housings of lamps where we also add some extra functions in housings so here we in short tell a bit about this and what we can do.



Lamp control functions.

Light Switch



In many situations it is good to have smart functions in lamps and one is here one function is a light activated Switch. This sense ambient light and turn on and off lamp to optimise the active time of operation. In larger areas with one single controller the local variations in ambient light can be large and here this makes all easier and better. This saves energy and improve operation on the Robusta street lamps.

Motion sensor



This is based on Micro waves / radar or PIR Thermal operation. Here sensor look down and watch any motion over a not moving back ground. Thermal sensors see hot spot variations. Radar sensors look for doppler shift patterns. When there is a change detection the system turn on lamp for a while. Lamp can have a low power output when none is here and add light when something moves in the range. Sensing distance is about 20-25 meters from sensor.

Remote control by wire

system is based on a control unit that speak with all lamps by a cable. The cable can be the power line and the signals are superimposed over the volts needed for the lamp unit. Range has be Km between PLC unit and lamp nodes. This is an old tested solution cable based and sometimes it is a good alternative.



Remote control Wire less design Here we have a high frequency radio based wireless system with a range that covers a 2 KM diameter circle. This design is based on a very advanced chip radio to get best range in crowded city areas with houses and lots of Radio noise in the air. System use a frequency jumper radio for best reliability. The system is web based and the local central covers the local area and many oil these can operate to cover a complete large city area. System can be controlled by a service engineers mobile phone or over a control centre. All signals are 128/256 Bit Encrypted.



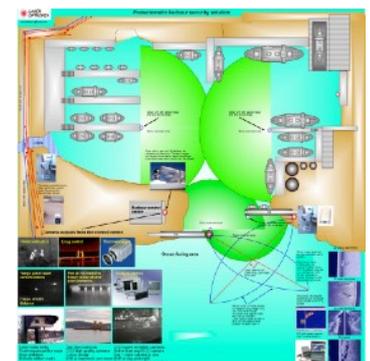
Web access points. Lamps can have an integrated web server with W-lan interface. This can be used for any W-lan application or services as free web or phone company users. This can of course talk with lamp it self and use same power cables to get all simple. In lamp systems in parks and around hotels this can add a special service to offer customers.



CCTV camera in lamp Lamps of Robusta design have eyes for led emitters with a lens at front. Here we use one of them to install a CCTV camera system and a wireless access point. Cameras are different and we select what is best at specific application and installation. Lamps can have night vision and darkness operation and even thermal operation. All works over Wi-Fi and can cooperate with access points and lamp control. In Robusta we just remove one LED and lens and here we put the CCTV camera unit its the hole in casing.



Control centre and software. We offer systems to control lamps and all needed functions. This included CCTV software. All sites are different and we have several solutions to match all in booth lampa kontras and CCTV and security applications. Lamps and control of a city area includes more that just some lamps. Here Sunnytek with long experience in booth cameras and surveillance have unique mixed competence to get all correct from start up.



Solar power and integrated battery units. We offer all lamps with a solar power option and integrated battery. Often cables and installation is a very high cost higher than lamps itself. Here we have the zero cable solution than makes all power it self. We cover range from 2000 Lumen to 25000 Lumen Robusta lamps with the solar option.

